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| APPLICATION NO.   | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
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| 10/743,070  | 12/23/2003  | Tatsuya Uchikawa     | OSP-13381CON        | 7432             |
| 21254   | 7590        | 06/28/2005           | EXAMINER            |                  |
| MCGINN & GIBB, PLLC<br>8321 OLD COURTHOUSE ROAD<br>SUITE 200<br>VIENNA, VA 22182-3817 |             |                      | LEURIG, SHARLENE L  |                  |
|   |             |                      | ART UNIT            | PAPER NUMBER     |
|   |             |                      | 2879                |                  |

DATE MAILED: 06/28/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.

10/743,070

Applicant(s)

UCHIKAWA ET AL.

Examiner

Sharlene Leurig

Art Unit

2879

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 08 April 2005.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-4,6-11,14-21,23 and 24 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-4,6,7,9-11,14-21,23 and 24 is/are rejected.
- 7) ☒ Claim(s) 8 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date 020305.
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_.

## DETAILED ACTION

### *Double Patenting*

1. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. See *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and, *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent is shown to be commonly owned with this application. See 37 CFR 1.130(b).

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

2. Claims 1, 2 and 23 are rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claim 3 of U.S. Patent No. 6,759,806 in view of Katsuo (JP 56-084863) (of record).

Claim 1 of the present application claims a lamp having a pair of electrodes with a contacting portion formed by each of the electrodes being in physical contact with the bulb in which they are sealed, wherein the electrodes have a length within a range determined by the power supplied to the lamp and the diameter of the electrodes.

Claim 3 of U.S. Patent No. 6,759,806 claims a lamp having a pair of electrodes with a contacting portion formed by each of the electrodes and the bulb in which they are sealed, wherein the electrodes have a length within a range determined by the power supplied to the lamp and the diameter of the electrodes.

Claim 3 of U.S. Patent No. 6,759,806 does not recite the contacting portion of the electrodes being in physical contact with the bulb.

Katsuo teaches a lamp having contacting portions formed by the electrodes being in physical contact with the bulb.

Therefore claim 1 of the present application is an obvious variation of claim 3 of U.S. Patent No. 6,759,806.

Claim 2 of the present application claims the lamp of claim 1 having molybdenum foils as the conductive elements.

Claim 3 of U.S. Patent No. 6,759,806 does not recite the conducting elements being molybdenum foils.

Katsuo teaches a lamp having molybdenum foils as the conducting elements.

Therefore claim 2 of the present application is an obvious variation of claim 3 of U.S. Patent No. 6,759,806.

Claim 23 of the present application claims the lamp of claim 1 wherein the contacting portion covers the distance from the end of the sealing portion to an end of the electrode terminating inside and beyond the edge of one of the pair of conductive elements.

Claim 3 of U.S. Patent No. 6,759,806 claims the contacting portion of the electrodes covering a distance from the sealing portion to an end of the electrode, the end of the electrode terminating inside and beyond an edge of the foil.

Therefore claim 23 of the present application is an obvious variation of claim 3 of U.S. Patent No. 6,759,806.

3. Claims 3 and 4 are rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claim 6 of U.S. Patent No. 6,759,806 in view of Katsuo (JP 56-084863) (of record) and further in view of Honda et al. (6,249,086) (of record).

Claim 3 of the present application claims the lamp of claim 1 having contacting portions having a surface roughness of 5 microns or less.

Claim 4 of the present application claims the lamp of claim 1 having contacting portions having a surface roughness of 2-3 microns.

Claim 3 of U.S. Patent No. 6,759,806 claims a lamp having a pair of electrodes with a contacting portion formed by each of the electrodes and the bulb in which they are sealed, wherein the electrodes have a length within a range determined by the power supplied to the lamp and the diameter of the electrodes.

Claim 3 of U.S. Patent No. 6,759,806 does not recite the contacting portion of the electrodes being in physical contact with the bulb.

Katsuo teaches a lamp having contacting portions formed by the electrodes being in physical contact with the bulb.

Claim 3 of U.S. Patent No. 6,759,806 does not recite the surface roughness of the electrodes.

Honda teaches a lamp having electrodes with a surface roughness of 3 microns or less, 1 micron or less or 0.5 microns or less in order to reduce blackening of the tube and increase the premium life of the lamp (column 16, line 65).

Therefore claims 3 and 4 of the present application is an obvious variation of claim 1 of U.S. Patent No. 6,759,806.

4. Claims 6, 7 and 24 are rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claim 6 of U.S. Patent No. 6,759,806 in view of Katsuo (JP 56-084863) (of record).

Claim 6 of the present application claims a lamp having a pair of electrodes with a contacting portion formed by each of the electrodes being in physical contact with the bulb in which they are sealed, wherein the surface roughness of the contacting portions of the electrodes is 5 microns or less.

Claim 6 of U.S. Patent No. 6,759,806 claims a lamp having a pair of electrodes with a contacting portion formed by each of the electrodes and the bulb in which they are sealed, wherein the surface roughness of the contacting portions of the electrodes is 5 microns or less.

Claim 6 of U.S. Patent No. 6,759,806 does not recite the contacting portion of the electrodes being in physical contact with the bulb.

Katsuo teaches a lamp having contacting portions formed by the electrodes being in physical contact with the bulb.

Therefore claim 6 of the present application is an obvious variation of claim 6 of U.S. Patent No. 6,759,806.

Claim 7 of the present application claims the lamp of claim 6 having molybdenum foils as the conductive elements.

Claim 6 of U.S. Patent No. 6,759,806 does not recite the conducting elements being molybdenum foils.

Katsuo teaches a lamp having molybdenum foils as the conducting elements.

Therefore claim 7 of the present application is an obvious variation of claim 6 of U.S. Patent No. 6,759,806.

Claim 24 of the present application claims the lamp of claim 6 wherein the contacting portion covers the distance from the end of the sealing portion to an end of the electrode terminating inside and beyond the edge of one of the pair of conductive elements.

Claim 6 of U.S. Patent No. 6,759,806 claims the contacting portion of the electrodes covering a distance from the sealing portion to an end of the electrode, the end of the electrode terminating inside and beyond an edge of the foil.

Therefore claim 24 of the present application is an obvious variation of claim 6 of U.S. Patent No. 6,759,806.

5. Claims 14 and 17 are rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claim 6 of U.S. Patent No. 6,759,806 in view of Katsuo (JP 56-084863) (of record) and further in view of Takeuti et al. (6,211,616) (of record).

Claim 14 of the present application claims the lamp of claim 6 having a mercury vapor within the bulb of between 0.12 and 0.3 mg/mm<sup>3</sup>.

Claim 6 of U.S. Patent No. 6,759,806 claims a lamp having a pair of electrodes with a contacting portion formed by each of the electrodes and the bulb in which they are sealed, wherein the surface roughness of the contacting portions of the electrodes is 5 microns or less.

Claim 6 of U.S. Patent No. 6,759,806 does not recite the contacting portion of the electrodes being in physical contact with the bulb.

Katsuo teaches a lamp having contacting portions formed by the electrodes being in physical contact with the bulb.

Claim 6 of U.S. Patent No. 6,759,806 does not recite the mercury vapor within the bulb.

Takeuti teaches a lamp having a mercury fill of 0.12 to 0.35 mg/mm<sup>3</sup>, which corresponds with the claimed range, in order to have a long-lived lamp (column 3, line 1).

Therefore claim 14 of the present application is an obvious variation of claim 6 of U.S. Patent No. 6,759,806.

Claim 17 of the present application claims the lamp of claim 6 having electrodes comprising tungsten containing potassium oxide.

Claim 6 of U.S. Patent No. 6,759,806 claims a lamp having a pair of electrodes with a contacting portion formed by each of the electrodes and the bulb in which they are sealed, wherein the surface roughness of the contacting portions of the electrodes is 5 microns or less.



Claim 6 of U.S. Patent No. 6,759,806 does not recite the contacting portion of the electrodes being in physical contact with the bulb.

Katsuo teaches a lamp having contacting portions formed by the electrodes being in physical contact with the bulb.

Claim 6 of U.S. Patent No. 6,759,806 does not recite the composition of the electrodes.

Takeuti teaches a lamp having tungsten electrodes containing potassium oxide in order to prevent tube blackening (column 3, line 10).

Therefore claim 17 of the present application is an obvious variation of claim 6 of U.S. Patent No. 6,759,806.

6. Claims 9-11, 15, 16 and 19 are rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claim 6 of U.S. Patent No. 6,759,806 in view of Katsuo (JP 56-084863) (of record) and further in view of Honda et al. (6,249,086) (of record).

Claim 9 of the present application claims the lamp of claim 6 having contacting portions having a surface roughness of 3 microns or less.

Claim 10 of the present application claims the lamp of claim 1 having contacting portions having a surface roughness of 1 micron or less.

Claim 11 of the present application claims the lamp of claim 1 having contacting portions having a surface roughness of 0.5 microns or less.

Claim 6 of U.S. Patent No. 6,759,806 claims a lamp having a pair of electrodes with a contacting portion formed by each of the electrodes and the bulb in which they are sealed, wherein the surface roughness of the contacting portions of the electrodes is 5 microns or less.

Claim 6 of U.S. Patent No. 6,759,806 does not recite the contacting portion of the electrodes being in physical contact with the bulb.

Katsuo teaches a lamp having contacting portions formed by the electrodes being in physical contact with the bulb.

Claim 6 of U.S. Patent No. 6,759,806 does not recite the surface roughness of the electrodes.

Honda teaches a lamp having electrodes with a surface roughness of 3 microns or less, 1 micron or less or 0.5 microns or less in order to reduce blackening of the tube and increase the premium life of the lamp (column 16, line 65).

Therefore claims 9-11 of the present application is an obvious variation of claim 6 of U.S. Patent No. 6,759,806.

Claim 15 of the present application claims the lamp of claim 6 having a halogen gas in the bulb in an amount between  $10^{-8}$  and  $10^{-2}$  mol/mm<sup>3</sup>.

Claim 6 of U.S. Patent No. 6,759,806 claims a lamp having a pair of electrodes with a contacting portion formed by each of the electrodes and the bulb in which they are sealed, wherein the surface roughness of the contacting portions of the electrodes is 5 microns or less.

Claim 6 of U.S. Patent No. 6,759,806 does not recite the contacting portion of the electrodes being in physical contact with the bulb.

Katsuo teaches a lamp having contacting portions formed by the electrodes being in physical contact with the bulb.

Claim 6 of U.S. Patent No. 6,759,806 does not recite the mercury vapor within the bulb.

Honda teaches a lamp having a halogen fill with a concentration having a lower limit of  $10^{-2}$  mol/mm<sup>3</sup>, which corresponds with the claimed range, in order to have a long-lived lamp.

Therefore claim 15 of the present application is an obvious variation of claim 6 of U.S. Patent No. 6,759,806.

Claim 16 of the present application claims the lamp of claim 6 having an inert gas in the bulb with a pressure of 6kPa or more.

Claim 6 of U.S. Patent No. 6,759,806 claims a lamp having a pair of electrodes with a contacting portion formed by each of the electrodes and the bulb in which they are sealed, wherein the surface roughness of the contacting portions of the electrodes is 5 microns or less.

Claim 6 of U.S. Patent No. 6,759,806 does not recite the contacting portion of the electrodes being in physical contact with the bulb.

Katsuo teaches a lamp having contacting portions formed by the electrodes being in physical contact with the bulb.

Claim 6 of U.S. Patent No. 6,759,806 does not recite the inert gas pressure in the bulb.

Honda teaches a lamp having an inert gas fill of 80 torr, which fits within the range of 6kPa or more (column 17, line 45), in order to have a long-lived lamp.

Therefore claim 16 of the present application is an obvious variation of claim 6 of U.S. Patent No. 6,759,806.

Claim 19 of the present application claims the lamp of claim 6 having contacting portions that are polished by an electrolytic polishing method.

Claim 6 of U.S. Patent No. 6,759,806 claims a lamp having a pair of electrodes with a contacting portion formed by each of the electrodes and the bulb in which they are sealed, wherein the surface roughness of the contacting portions of the electrodes is 5 microns or less.

Claim 6 of U.S. Patent No. 6,759,806 does not recite the contacting portion of the electrodes being in physical contact with the bulb.

Katsuo teaches a lamp having contacting portions formed by the electrodes being in physical contact with the bulb.

Claim 6 of U.S. Patent No. 6,759,806 does not recite polished electrodes.

Honda teaches a lamp having electrodes polished by electrolytic polishing to yield the desired surface roughness.

Therefore claim 19 of the present application is an obvious variation of claim 6 of U.S. Patent No. 6,759,806.

7. Claim 18 is rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claim 6 of U.S. Patent No. 6,759,806 in view of Katsuo (JP 56-084863) (of record) and further in view of Genz (5,635,796) (of record).

Claim 18 of the present application claims the lamp of claim 6 having a bulb wall loading of  $0.8\text{W}/\text{mm}^2$  or more.

Claim 6 of U.S. Patent No. 6,759,806 claims a lamp having a pair of electrodes with a contacting portion formed by each of the electrodes and the bulb in which they are sealed, wherein the surface roughness of the contacting portions of the electrodes is 5 microns or less.

Claim 6 of U.S. Patent No. 6,759,806 does not recite the contacting portion of the electrodes being in physical contact with the bulb.

Katsuo teaches a lamp having contacting portions formed by the electrodes being in physical contact with the bulb.

Claim 6 of U.S. Patent No. 6,759,806 does not recite the bulb wall loading.

Genz teaches a wall load of between 40 and 85  $\text{W}/\text{cm}^2$ , which corresponds to  $0.8\text{ W}/\text{mm}^2$  or more, as part of a long-lived lamp.

Therefore claim 18 of the present application is an obvious variation of claim 6 of U.S. Patent No. 6,759,806.

8. Claim 20 is rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claim 3 of U.S. Patent No. 6,759,806 in

view of Katsuo (JP 56-084863) (of record) and further in view of Sugitani (6,271,628) (of record).

Claim 20 of the present application claims a lamp having the structure of claim 1 and an internal pressure of at least 8 MPa.

Claim 3 of U.S. Patent No. 6,759,806 claims a lamp having a pair of electrodes with a contacting portion formed by each of the electrodes and the bulb in which they are sealed, wherein the electrodes have a length within a range determined by the power supplied to the lamp and the diameter of the electrodes.

Claim 3 of U.S. Patent No. 6,759,806 does not recite the contacting portion of the electrodes being in physical contact with the bulb.

Katsuo teaches a lamp having contacting portions formed by the electrodes being in physical contact with the bulb.

Claim 3 of U.S. Patent No. 6,759,806 does not recite the internal pressure of the lamp.

Sugitani teaches an internal pressure of 110 atm (column 7, lines 67), which is equal to 11 MPa, which fits within the claimed range, in order to prevent arcing (column 1, lines 28-30).

Therefore claim 20 of the present application is an obvious variation of claim 3 of U.S. Patent No. 6,759,806.

9. Claim 21 is rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claim 3 of U.S. Patent No. 6,759,806 in

view of Katsuo (JP 56-084863) (of record) and further in view of Takeuti et al. (6,211,616) (of record).

Claim 21 of the present application claims a lamp having the structure of claim 1 and a distance between the electrodes of 1.0 to 2.0 mm.

Claim 3 of U.S. Patent No. 6,759,806 claims a lamp having a pair of electrodes with a contacting portion formed by each of the electrodes and the bulb in which they are sealed, wherein the electrodes have a length within a range determined by the power supplied to the lamp and the diameter of the electrodes.

Claim 3 of U.S. Patent No. 6,759,806 does not recite the contacting portion of the electrodes being in physical contact with the bulb.

Katsuo teaches a lamp having contacting portions formed by the electrodes being in physical contact with the bulb.

Claim 3 of U.S. Patent No. 6,759,806 does not recite the inter-electrode distance.

Takeuti teaches an arc gap between the electrodes within the claimed range (column 4, line 65) and teaches it is well known in the art to provide such a distance (column 2, lines 23-24).

Therefore claim 21 of the present application is an obvious variation of claim 3 of U.S. Patent No. 6,759,806.

***Allowable Subject Matter***

10. Claim 8 is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

11. The following is a statement of reasons for the indication of allowable subject matter: the prior art of record fails to teach or suggest the combination of limitations as set forth in the claim, specifically comprising a lamp having the structure of claim 6 wherein the length of the contacting portion of the electrodes is in a range between  $P/150$  and  $P/100$  mm from an end of the electrodes, where  $P$  is the power supplied to the lamp in watts.

***Response to Arguments***

12. Applicant's arguments with respect to claims 1-4, 6, 7, 9-11, 14-21, 23 and 24 have been considered but are moot in view of the new ground(s) of rejection.

***Conclusion***

13. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within



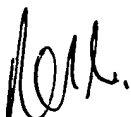
TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Sharlene Leurig whose telephone number is (571) 272-2455. The examiner can normally be reached on Monday through Friday, 8:30am-5:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Nimesh Patel can be reached on (571) 272-2457. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

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